SEQUENCE LISTING

<110> Emtage, Peter C.R.
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Zhao, Q.
Liu, C.
Drmanac, R. T.

<120> MATERIALS AND METHODS RELATING TO THERAPY AND DIAGNOSIS USING TARGETING OF CELLS THAT EXPRESS JPL POLYPEPTIDES

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<140> NOT YET ASSIGNED
<141> 2003-07-24

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Ala Ser Ser Arg Lys Arg Thr Pro Ala Ala Gly Gly Phe Phe Arg Arg
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Ser Leu Leu Leu Ser Gly Leu Arg Ala Gly Gly Arg Arg Ser Ser Leu
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Gly Ser Lys Arg Gly Ser Leu Arg Ser Glu Val Ser Ser Glu Val Gly
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agc acc gga ccg ccc ggc tcg gag gcc agc ggg ccc ccg gcc gca gcg      878
Ser Thr Gly Pro Pro Gly Ser Glu Ala Ser Gly Pro Pro Ala Ala Ala
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ccg ccc gcc ctc atc gag ggc tcg gcc aca gag gtg tac gcg ggc gag      926
Pro Pro Ala Leu Ile Glu Gly Ser Ala Thr Glu Val Tyr Ala Gly Glu
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Arg Asn Arg Leu Val His Gly Gly Arg Val Arg Ser Leu Leu Pro Leu
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gcc ctt cgg cgg ggc aag gtt aag gag aag gtg gac agg gct gtc gag     1166
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Val Ala Glu Lys Ala Val Glu Ala Ala Arg Met Ala Lys Leu Ile Ala
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Gln Asp Leu Gln Pro Met Leu Glu Ala Pro Gly Arg Arg Pro Arg Gln
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Ser Pro Leu Pro Pro Gly Gly Asp Gln Gly Pro Phe Ser Ser Pro Lys
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gcc cca gca ggc acg gag cct gag ccc atc gcc atg ctg gtc ctg agg     1790
Ala Pro Ala Gly Thr Glu Pro Glu Pro Ile Ala Met Leu Val Leu Arg
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Gly Glu Pro Ala Ala Thr Glu Arg Pro Ala Gln Pro Gly Ala Ala Asn
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Leu Phe Ser Gln Leu Leu Thr
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Leu Gly Val Phe Thr Gly Pro Gly Gly His Ser Tyr Gln Gly His Trp
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Gly Phe Val Leu Ala Gly Pro Gly Asp Ala Asp Gly Ala Ser Ser Arg
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Pro Leu Leu Gly Gly Cys Ser Asp Ser Ser Gly Ser Leu Arg Glu Glu
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Glu Gly Glu Asp Glu Glu Pro Leu Pro Pro Leu Arg Ala Pro Ala Gly
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Thr Glu Pro Glu Pro Ile Ala Met Leu Val Leu Arg Gly Ser Ser Ser
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Arg Gly Pro Asp Ala Gly Cys Leu Thr Glu Glu Leu Gly Glu Pro Ala
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Ala Thr Glu Arg Pro Ala Gln Pro Gly Ala Ala Asn Pro Leu Val Val
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Thr Arg Pro Asp Gly Ser Arg Glu Glu Gly Lys Tyr Lys Arg Asn Arg
325 330 335

Leu Val His Gly Gly Arg Val Arg Ser Leu Leu Pro Leu Ala Leu Arg
340 345 350

Arg Gly Lys Val Lys Glu Lys Val Asp Arg Ala Val Glu Gly Ala Arg
355 360 365

Arg Ala Val Ser Ala Ala Arg Gln Arg Gln Glu Ile Ala Ala Ala Arg
370 375 380

Ala Ala Asp Ala Leu Leu Lys Ala Val Ala Ala Ser Ser Val Ala Glu
385 390 395 400

Lys Ala Val Glu Ala Ala Arg Met Ala Lys Leu Ile Ala Gln Asp Leu
405 410 415

Gln Pro Met Leu Glu Ala Pro Gly Arg Arg Pro Arg Gln Asp Ser Glu
420 425 430

Gly Ser Asp Thr Glu Pro Leu Asp Glu Asp Ser Pro Gly Val Tyr Glu
435 440 445

Asn Gly Leu Thr Pro Ser Glu Gly Ser Pro Glu Leu Pro Ser Ser Pro
450 455 460

Ala Ser Ser Arg Gln Pro Trp Arg Pro Pro Ala Cys Arg Ser Pro Leu
465 470 475 480

Pro Pro Gly Gly Asp Gln Gly Pro Phe Ser Ser Pro Lys Ala Trp Pro
485 490 495

Glu Glu Trp Gly Gly Ala Gly Ala Gln Ala Glu Glu Leu Ala Gly Tyr
500 505 510

Glu Ala Glu Asp Glu Ala Gly Met Gln Gly Pro Gly Pro Arg Asp Gly
515 520 525

Ser Pro Leu Leu Gly Gly Cys Ser Asp Ser Ser Gly Ser Leu Arg Glu
530 535 540

Glu Glu Gly Glu Asp Glu Glu Pro Leu Pro Pro Leu Arg Ala Pro Ala
545 550 555 560

Gly Thr Glu Pro Glu Pro Ile Ala Met Leu Val Leu Arg Gly Ser Ser
565 570 575

```
Ser Arg Gly Pro Asp Ala Gly Cys Leu Thr Glu Glu Leu Gly Glu Pro
            580                 585                 590

Ala Ala Thr Glu Arg Pro Ala Gln Pro Gly Ala Ala Asn Pro Leu Val
        595                 600                 605

Val Gly Ala Val Ala Leu Leu Asp Leu Ser Leu Ala Phe Leu Phe Ser
    610                 615                 620

Gln Leu Leu Thr
625
```

<210> 6
<211> 661
<212> PRT
<213> Homo sapiens

<400> 6

```
Met Thr Gly Gly Arg Phe Asp Phe Asp Asp Gly Gly Thr Tyr Cys Gly
1               5                   10                  15

Gly Trp Glu Glu Gly Lys Ala His Gly His Gly Ile Cys Thr Gly Pro
            20                  25                  30

Lys Gly Gln Gly Glu Tyr Ser Gly Ser Trp Ser His Gly Phe Glu Val
        35                  40                  45

Val Gly Gly Tyr Thr Trp Pro Ser Gly Asn Thr Tyr Gln Gly Tyr Trp
    50                  55                  60

Ala Gln Gly Lys Arg His Gly Leu Gly Val Glu Thr Lys Gly Lys Trp
65                  70                  75                  80

Met Tyr Arg Gly Glu Trp Ser His Gly Phe Lys Gly Arg Tyr Gly Val
                85                  90                  95

Arg Gln Ser Leu Cys Thr Pro Ala Arg Tyr Glu Gly Thr Trp Ser Asn
            100                 105                 110

Gly Leu Gln Asp Gly Tyr Gly Val Glu Thr Tyr Gly Asp Gly Gly Thr
        115                 120                 125

Tyr Gln Gly Gln Trp Ala Gly Gly Met Arg His Gly Tyr Gly Val Arg
    130                 135                 140

Gln Ser Val Pro Tyr Gly Met Ala Thr Val Ile Arg Ser Pro Leu Arg
145                 150                 155                 160
```

```
Thr Ser Leu Ala Ser Leu Arg Ser Glu Gln Ser Asn Gly Ser Val Leu
                165                 170                 175

His Asp Ala Ala Ala Ala Ala Asp Ser Pro Ala Gly Thr Arg Gly Gly
            180                 185                 190

Phe Val Leu Asn Phe His Ala Asp Ala Glu Leu Ala Gly Lys Lys Lys
        195                 200                 205

Gly Gly Leu Phe Arg Arg Gly Ser Leu Leu Gly Ser Met Lys Leu Arg
    210                 215                 220

Lys Ser Glu Ser Lys Ser Ser Ile Ser Ser Lys Arg Ser Ser Val Arg
225                 230                 235                 240

Ser Asp Ala Ala Met Ser Arg Ile Ser Ser Ser Asp Ala Asn Ser Thr
                245                 250                 255

Ile Ser Phe Gly Asp Val Asp Cys Asp Phe Cys Pro Val Glu Asp His
            260                 265                 270

Val Asp Ala Thr Thr Thr Glu Thr Tyr Met Gly Glu Trp Lys Asn Asp
        275                 280                 285

Lys Arg Asn Gly Phe Gly Val Ser Glu Arg Ser Asn Gly Met Lys Tyr
    290                 295                 300

Glu Gly Glu Trp Ala Asn Asn Lys Arg His Gly Tyr Gly Cys Thr Val
305                 310                 315                 320

Phe Pro Asp Gly Ser Lys Glu Glu Gly Lys Tyr Lys Asn Asn Ile Leu
                325                 330                 335

Val Arg Gly Ile Arg Lys Gln Leu Ile Pro Ile Arg His Thr Lys Thr
            340                 345                 350

Arg Glu Lys Val Asp Arg Ala Ile Glu Gly Ala Gln Arg Ala Ala Ala
        355                 360                 365

Met Ala Arg Thr Lys Val Glu Ile Ala Asn Ser Arg Thr Ala His Ala
    370                 375                 380

Arg Ala Lys Ala Asp Ala Ala Asp Gln Ala Ala Leu Ala Ala Arg Gln
385                 390                 395                 400

Glu Cys Asp Ile Ala Arg Ala Val Ala Arg Glu Leu Ser Pro Asp Phe
```

405 410 415

Tyr Gln Pro Gly Pro Asp Tyr Val Lys Gln Arg Phe Gln Glu Gly Val
420 425 430

Asp Ala Lys Glu Asn Pro Glu Glu Lys Val Pro Glu Lys Pro Pro Thr
435 440 445

Pro Lys Glu Ser Pro His Phe Tyr Arg Lys Gly Thr Thr Pro Pro Arg
450 455 460

Ser Pro Glu Ala Ser Pro Lys His Ser His Ser Pro Ala Ser Ser Pro
465 470 475 480

Lys Pro Leu Lys Lys Gln Asn Pro Ser Ser Gly Ala Arg Leu Asn Gln
485 490 495

Asp Lys Arg Ser Val Ala Asp Glu Gln Val Thr Ala Ile Val Asn Lys
500 505 510

Pro Leu Met Ser Lys Ala Pro Thr Lys Glu Ala Gly Ala Val Val Pro
515 520 525

Gln Ser Lys Tyr Ser Gly Arg His His Ile Pro Asn Pro Ser Asn Gly
530 535 540

Glu Leu His Ser Gln Tyr His Gly Tyr Tyr Val Lys Leu Asn Ala Pro
545 550 555 560

Gln His Pro Pro Val Asp Val Glu Asp Gly Asp Gly Ser Ser Gln Ser
565 570 575

Ser Ser Ala Leu Val His Lys Pro Ser Ala Asn Lys Trp Ser Pro Ser
580 585 590

Lys Ser Val Thr Lys Pro Val Ala Lys Glu Ser Lys Ala Glu Pro Lys
595 600 605

Ala Lys Lys Ser Glu Leu Ala Ile Pro Lys Asn Pro Ala Ser Asn Asp
610 615 620

Ser Cys Pro Ala Leu Glu Lys Glu Ala Asn Ser Gly Pro Asn Ser Ile
625 630 635 640

Met Ile Val Leu Val Met Leu Leu Asn Ile Gly Leu Ala Ile Leu Phe
645 650 655

Val His Phe Leu Thr
660

<210> 7
<211> 696
<212> PRT
<213> Homo sapiens

<400> 7

Met Ser Gly Gly Arg Phe Asp Phe Asp Asp Gly Gly Ala Tyr Cys Gly
1 5 10 15

Gly Trp Glu Gly Gly Lys Ala His Gly His Gly Leu Cys Thr Gly Pro
20 25 30

Lys Gly Gln Gly Glu Tyr Ser Gly Ser Trp Asn Phe Gly Phe Glu Val
35 40 45

Ala Gly Val Tyr Thr Trp Pro Ser Gly Asn Thr Phe Glu Gly Tyr Trp
50 55 60

Ser Gln Gly Lys Arg His Gly Leu Gly Ile Glu Thr Lys Gly Arg Trp
65 70 75 80

Leu Tyr Lys Gly Glu Trp Thr His Gly Phe Lys Gly Arg Tyr Gly Ile
85 90 95

Arg Gln Ser Ser Ser Ser Gly Ala Lys Tyr Glu Gly Thr Trp Asn Asn
100 105 110

Gly Leu Gln Asp Gly Tyr Gly Thr Glu Thr Tyr Ala Asp Gly Gly Thr
115 120 125

Tyr Gln Gly Gln Phe Thr Asn Gly Met Arg His Gly Tyr Gly Val Arg
130 135 140

Gln Ser Val Pro Tyr Gly Met Ala Val Val Val Arg Ser Pro Leu Arg
145 150 155 160

Thr Ser Leu Ser Ser Leu Arg Ser Glu His Ser Asn Gly Thr Val Ala
165 170 175

Pro Asp Ser Pro Ala Ser Pro Ala Ser Asp Gly Pro Ala Leu Pro Ser
180 185 190

Pro Ala Ile Pro Arg Gly Gly Phe Ala Leu Ser Leu Leu Ala Asn Ala
195 200 205

```
Glu Ala Ala Ala Arg Ala Pro Lys Gly Gly Gly Leu Phe Gln Arg Gly
    210                 215                 220

Ala Leu Leu Gly Lys Leu Arg Arg Ala Glu Ser Arg Thr Ser Val Gly
225                 230                 235                 240

Ser Gln Arg Ser Arg Val Ser Phe Leu Lys Ser Asp Leu Ser Ser Gly
                245                 250                 255

Ala Ser Asp Ala Ala Ser Thr Ala Ser Leu Gly Glu Ala Ala Glu Gly
            260                 265                 270

Ala Asp Glu Ala Ala Pro Phe Glu Ala Asp Ile Asp Ala Thr Thr Thr
        275                 280                 285

Glu Thr Tyr Met Gly Glu Trp Lys Asn Asp Lys Arg Ser Gly Phe Gly
    290                 295                 300

Val Ser Glu Arg Ser Ser Gly Leu Arg Tyr Glu Gly Glu Trp Leu Asp
305                 310                 315                 320

Asn Leu Arg His Gly Tyr Gly Cys Thr Thr Leu Pro Asp Gly His Arg
                325                 330                 335

Glu Glu Gly Lys Tyr Arg His Asn Val Leu Val Lys Asp Thr Lys Arg
            340                 345                 350

Arg Met Leu Gln Leu Lys Ser Asn Lys Val Arg Gln Lys Val Glu His
        355                 360                 365

Ser Val Glu Gly Ala Gln Arg Ala Ala Ala Ile Ala Arg Gln Lys Ala
    370                 375                 380

Glu Ile Ala Ala Ser Arg Thr Ser His Ala Lys Ala Lys Ala Glu Ala
385                 390                 395                 400

Ala Glu Gln Ala Ala Leu Ala Ala Asn Gln Glu Ser Asn Ile Ala Arg
                405                 410                 415

Thr Leu Ala Arg Glu Leu Ala Pro Asp Phe Tyr Gln Pro Gly Pro Glu
            420                 425                 430

Tyr Gln Lys Arg Arg Leu Leu Gln Glu Ile Leu Glu Asn Ser Glu Ser
        435                 440                 445

Leu Leu Glu Pro Pro Asp Arg Gly Ala Gly Ala Ala Gly Leu Pro Gln
    450                 455                 460
```

```
Pro Pro Arg Glu Ser Pro Gln Leu His Glu Arg Glu Thr Pro Arg Pro
465                 470                 475                 480

Glu Gly Gly Ser Pro Ser Pro Ala Gly Thr Pro Pro Gln Pro Lys Arg
                485                 490                 495

Pro Arg Pro Gly Val Ser Lys Asp Gly Leu Leu Ser Pro Gly Ala Trp
            500                 505                 510

Asn Gly Glu Pro Ser Gly Glu Gly Ser Arg Ser Val Thr Pro Ser Glu
        515                 520                 525

Gly Ala Gly Arg Arg Ser Pro Ala Arg Pro Ala Thr Glu Arg Met Ala
    530                 535                 540

Ile Glu Ala Leu Gln Ala Pro Pro Ala Pro Ser Arg Glu Pro Glu Val
545                 550                 555                 560

Ala Leu Tyr Gln Gly Tyr His Ser Tyr Ala Val Arg Thr Thr Pro Pro
                565                 570                 575

Glu Pro Pro Pro Phe Glu Asp Gln Pro Glu Pro Glu Val Ser Gly Ser
            580                 585                 590

Glu Ser Ala Pro Ser Ser Pro Ala Thr Ala Pro Leu Gln Ala Pro Thr
        595                 600                 605

Leu Arg Gly Pro Glu Pro Ala Arg Glu Thr Pro Ala Lys Leu Glu Pro
    610                 615                 620

Lys Pro Ile Ile Pro Lys Ala Glu Pro Arg Ala Lys Ala Arg Lys Thr
625                 630                 635                 640

Glu Ala Arg Gly Leu Thr Lys Ala Gly Ala Lys Lys Lys Ala Arg Lys
                645                 650                 655

Glu Ala Ala Leu Ala Ala Glu Ala Glu Val Glu Val Glu Glu Val Pro
            660                 665                 670

Asn Thr Ile Leu Ile Cys Met Val Ile Leu Leu Asn Ile Gly Leu Ala
        675                 680                 685

Ile Leu Phe Val His Leu Leu Thr
    690                 695
```

<210> 8
<211> 748

<212> PRT
<213> Homo sapiens

<400> 8

```
Met Ser Ser Gly Gly Arg Phe Asn Phe Asp Asp Gly Gly Ser Tyr Cys
1               5                  10                  15

Gly Gly Trp Glu Asp Gly Lys Ala His Gly His Gly Val Cys Thr Gly
            20                  25                  30

Pro Lys Gly Gln Gly Glu Tyr Thr Gly Ser Trp Ser His Gly Phe Glu
        35                  40                  45

Val Leu Gly Val Tyr Thr Trp Pro Ser Gly Asn Thr Tyr Gln Gly Thr
    50                  55                  60

Trp Ala Gln Gly Lys Arg His Gly Ile Gly Leu Glu Ser Lys Gly Lys
65                  70                  75                  80

Trp Val Tyr Lys Gly Glu Trp Thr His Gly Phe Lys Gly Arg Tyr Gly
                85                  90                  95

Val Arg Glu Cys Ala Gly Asn Gly Ala Lys Tyr Glu Gly Thr Trp Ser
            100                 105                 110

Asn Gly Leu Gln Asp Gly Tyr Gly Thr Glu Thr Tyr Ser Asp Gly Gly
        115                 120                 125

Thr Tyr Gln Gly Gln Trp Val Gly Gly Met Arg Gln Gly Tyr Gly Val
    130                 135                 140

Arg Gln Ser Val Pro Tyr Gly Met Ala Ala Val Ile Arg Ser Pro Leu
145                 150                 155                 160

Arg Thr Ser Ile Asn Ser Leu Arg Ser Glu His Thr Asn Gly Thr Pro
                165                 170                 175

Leu His Pro Asp Ala Ser Pro Ala Val Asp Gly Ser Pro Ala Val Ser
            180                 185                 190

Arg Gly Gly Phe Val Leu Val Ala His Ser Asp Ser Glu Ile Leu Lys
        195                 200                 205

Ser Lys Lys Lys Gly Leu Phe Arg Arg Ser Leu Leu Ser Gly Leu Lys
    210                 215                 220

Leu Arg Lys Ser Glu Ser Lys Ser Ser Leu Ala Ser Gln Arg Ser Lys
225                 230                 235                 240
```

```
Gln Ser Ser Phe Arg Ser Glu Ala Gly Met Ser Thr Val Ser Ser Thr
                245                 250                 255

Ala Ser Asp Ile His Ser Thr Ile Ser Leu Gly Glu Ala Glu Ala Glu
            260                 265                 270

Leu Ala Val Ile Glu Asp Asp Ile Asp Ala Thr Thr Thr Glu Thr Tyr
        275                 280                 285

Val Gly Glu Trp Lys Asn Asp Lys Arg Ser Gly Phe Gly Val Ser Gln
    290                 295                 300

Arg Ser Asp Gly Leu Lys Tyr Glu Gly Glu Trp Ala Ser Asn Arg Arg
305                 310                 315                 320

His Gly Tyr Gly Cys Met Thr Phe Pro Asp Gly Thr Lys Glu Glu Gly
                325                 330                 335

Lys Tyr Lys Gln Asn Ile Leu Val Gly Gly Lys Arg Lys Asn Leu Ile
            340                 345                 350

Pro Leu Arg Ala Ser Lys Ile Arg Glu Lys Val Asp Arg Ala Val Glu
        355                 360                 365

Ala Ala Glu Arg Ala Ala Thr Ile Ala Lys Gln Lys Ala Glu Ile Ala
    370                 375                 380

Ala Ser Arg Thr Ser His Ser Arg Ala Lys Ala Glu Ala Ala Leu Thr
385                 390                 395                 400

Ala Ala Gln Lys Ala Gln Glu Glu Ala Arg Ile Ala Arg Ile Thr Ala
                405                 410                 415

Lys Glu Phe Ser Pro Ser Phe Gln His Arg Glu Asn Gly Leu Glu Tyr
            420                 425                 430

Gln Arg Pro Lys Arg Gln Thr Ser Cys Asp Asp Ile Glu Val Leu Ser
        435                 440                 445

Thr Gly Thr Pro Leu Gln Gln Glu Ser Pro Glu Leu Tyr Arg Lys Gly
    450                 455                 460

Thr Thr Pro Ser Asp Leu Thr Pro Asp Asp Ser Pro Leu Gln Ser Phe
465                 470                 475                 480

Pro Thr Ser Pro Ala Ala Thr Pro Pro Pro Ala Pro Ala Ala Arg Asn
```

485 490 495

Lys Val Ala His Phe Ser Arg Gln Val Ser Val Asp Glu Glu Arg Gly
500 505 510

Gly Asp Ile Gln Met Leu Leu Glu Gly Arg Ala Gly Asp Cys Ala Arg
515 520 525

Ser Ser Trp Gly Glu Glu Gln Ala Gly Gly Ser Arg Gly Val Arg Ser
530 535 540

Gly Ala Leu Arg Gly Gly Leu Leu Val Asp Asp Phe Arg Thr Arg Gly
545 550 555 560

Ser Gly Arg Lys Gln Pro Gly Asn Pro Lys Pro Arg Glu Arg Arg Thr
565 570 575

Glu Ser Pro Pro Val Phe Thr Trp Thr Ser His His Arg Ala Ser Asn
580 585 590

His Ser Pro Gly Gly Ser Arg Leu Leu Glu Leu Gln Glu Glu Lys Leu
595 600 605

Ser Asn Tyr Arg Met Glu Met Lys Pro Leu Leu Arg Met Glu Thr His
610 615 620

Pro Gln Lys Arg Arg Tyr Ser Lys Gly Gly Ala Cys Arg Gly Leu Gly
625 630 635 640

Asp Asp His Arg Pro Glu Asp Arg Gly Phe Gly Val Gln Arg Leu Arg
645 650 655

Ser Lys Ala Gln Asn Lys Glu Asn Phe Arg Pro Ala Ser Ser Ala Glu
660 665 670

Pro Ala Val Gln Lys Leu Ala Ser Leu Arg Leu Gly Gly Ala Glu Pro
675 680 685

Arg Leu Leu Arg Trp Asp Leu Thr Phe Ser Pro Pro Gln Lys Ser Leu
690 695 700

Pro Val Ala Leu Glu Ser Asp Glu Glu Asn Gly Asp Glu Leu Lys Ser
705 710 715 720

Ser Thr Gly Ser Ala Pro Ile Leu Val Val Met Val Ile Leu Leu Asn
725 730 735

Ile Gly Val Ala Ile Leu Phe Ile Asn Phe Phe Ile
740 745

<210> 9
<211> 17
<212> PRT
<213> HOmo sapiens

<400> 9

Leu Val Val Gly Ala Val Ala Leu Leu Asp Leu Ser Leu Ala Phe Leu
1 5 10 15

Phe

<210> 10
<211> 35
<212> PRT
<213> Homo sapiens

<400> 10

Arg Arg Thr Ser Leu Asp Ser Gly His Ser Asp Pro Pro Thr Pro Pro
1 5 10 15

Pro Pro Leu Pro Leu Pro Gly Asp Glu Gly Gly Ser Pro Ala Ser Gly
20 25 30

Ser Arg Gly
35

<210> 11
<211> 19
<212> DNA
<213> Homo sapiens

<400> 11
gcagacgccc tcctaaagg 19

<210> 12
<211> 21
<212> DNA
<213> Homo sapiens

<400> 12
gctatcagtt tggccattcg a 21